INTRODUCTION

Rugrats

Rugrats™ is a game based on the Nickelodeon™ animated series of the same name. The series is written and produced by Klasky Csupo, Inc., in conjunction with Nickelodeon and deals with life from a baby's point of view.

The Rugrats are Tommy, our one-year-old hero, and his friends, Chuckie, Phil & Lil and his cousin Angelica. Whenever adults are around, the Rugrats act like real babies, but when they're alone they drop their witless pose and talk to each other with the vocabulary of five-year-olds. As Tommy and his pals wobble through life, supported by legs not yet used to walking, they show us the world as a baby views and understands it. The Rugrats' world is one that exists below our knees; here mundane things and events turn into grand, comic adventures.

The Game

The Rugrats game features two different modes of play, each with a unique look and feel:

- The primary mode of play and focus of the product is *The Big Adventure*, a free-roaming action-adventure from a 3rd person perspective that features self-paced exploration and action/adventure in a variety of environments. Players will control Tommy, Chuckie, Phil & Lil, and other Rugrats characters on a series of adventures based on episodes of the animated series.

- A second mode of play, *Kid's Games* allows users to engage themselves in traditional outdoor kids games with the Rugrats. Tag and Capture the Flag are good examples. This mode supports up to two players with a splitscreen display mode on the Playstation.

Levels will be constructed to allow exploration from the beginning of most stages so that players can feel things out and get comfortable with their surroundings. By creating a world that is mostly non-threatening, we allow the player to embrace his freedom unhindered by the fear that death lurks around every corner.

Most of the game will take place in well-established settings - in and around the Pickles' home, at the neighborhood park, or visiting cousin Angelica.

Design Goals

The overall look and feel of the Rugrats game will be a 3D translation of the Klasky Csupo style. Very close attention will be paid to make the product look exactly like the show. All characters, models, environments, and animations, even sounds and music will be carefully crafted to create a "living cartoon" experience. All players, even the most ardent Rugrats fan, should simply accept that they are leading Tommy and his cohorts on another grand adventure in their world.

Target Audience

Rugrats is a sophisticated show for today's sophisticated children. Instead of talking down to its audience, it assumes children are intelligent and discriminating viewers. And, though children aged 6 through 12 are the primary target audience, Rugrats appeals to the 2-5 age group as well as to adults.

Like the show, the Rugrats game will focus on a target audience between the ages 6 and 12. For younger kids, the game will emphasize and encourage "at your own pace" exploration. Older, more seasoned gameplayers will be challenged by cooperative character puzzle-solving elements and increased arcade action.

This product will automatically attract the attention of Rugrats fans, and by creating a game that is true to the show in look and feel we can guarantee one degree of success in the market. Simply pandering to this segment of the market would be a mistake. Our goal at n-Space is to create a product that excels in both gameplay and in its accurate portrayal of the Rugrats property - a product that is embraced by gameplayers and Rugrats fans world-wide.

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STORYLINE

Source Material

One of the first decisions facing the team regards content. What situations should the Rugrats find themselves in and what challenges should they face? What parts of the Rugrats world should the designers draw from in creating levels for the game? Three possibilities exist:

1) **The Rugrats Movie.** Due for release in the Fall of 1998, the theatrical premiere of the license will be a hallmark event in the Rugrats world and a great opportunity to capitalize on the accompanying tidal wave of marketing and promotion.

2) **Episodes of the animated series.** Since 1991 the Rugrats animated series has been an important part of the Nickelodeon lineup. Six years and over 100 episodes later, the award-winning series is one of the most popular cartoons in America.

3) **Homegrown content.** Given the huge base of "authentic" material to build on, a talented design group could feasibly consider creating new and unique situations that the Rugrats stumble into.

Clearly, it would be a mistake to create a game based entirely on homegrown content. Doing so would only create more work for the designers and compound the already difficult task of recreating the look and feel of the Rugrats world. In some cases, however, it will be essential to create new situations to fill the gaps between episodes and pull the world together as one.

Other situations may occur where homegrown content is appropriate. Hide and Seek is a good example. While a game of Hide and Seek may not be appropriate material for an episode of Rugrats, it fits well with the characters and is an excellent basis for fun in the game. Still, these situations are the exception and not the rule. For the bulk of the game's content, we are left with the first two options. Both have their strengths and weaknesses.

One benefit to doing a game based on the Rugrats Movie is that the script provides the player with motivation and a central goal. It creates the situations and the conflict and forms a strong backbone for the game. A game based on the movie could also provide additional leverage to the cross-product marketing and promotional efforts, securing more shelf space and advertising.

The downside is that any game based on a movie script will inherently be a linear experience that is limited in scope.

Throughout the design process, we have focused our efforts on creating a non-linear experience that emphasizes self-paced exploration in a (mostly) non-threatening environment. We feel that these elements are critical to creating a game that stands out in today's market, with broad-based appeal to Rugrats fans and gamers in general, young and old alike.

With that goal in mind, we are proceeding with an episode-based design, drawing from material presented in the animated series (TAS). The only disadvantage to this approach is that its non-linear nature makes it more difficult to define a central goal for the player and create a backbone storyline. This disadvantage is easily outweighed by the following benefits:

- TAS provides a much larger base of material to work with. The 100+ episodes provide us with a tremendous variety of situations to present in the game, each with different settings, situations, even characters. Today's market demands games that feature a variety of experiences.

- Working from the episodes allows us to choose material that fits a well-designed game mechanic rather than designing a game mechanic that fits the script. This lets us focus our efforts on creating a single game engine that is flexible enough to handle variations on a central theme of gameplay, rather than building the multiple engines that would be required to handle the diverse situations presented in the movie. The result: a stronger, more focused and competitive product.

- TAS is based at the Pickles' home, providing a logical central setting for the game and a place for younger kids to explore and experiment. In the current design it acts as a "hub" for the game, providing launch points into the episodes (levels) in a non-linear manner.

Still, this approach doesn't prohibit us from featuring tie-ins to the Rugrats Movie. The most obvious way to do so would be to use scenes or situations from the movie as off-site episodes in the game. For example, we could have a level that features Chuckie fighting off the frenzied monkeys in the woods, or a mode where the player has to control the "runaway" Reptar wagon along the busy city streets.

Another option would be to create a backstory for the game that positions it as a prologue or epilogue to the movie. A prologue would spin a story that culminates in the opening scene of the movie - Didi's baby shower. As an epilogue, we could feature a mix of episodes spanning all time periods - before, during, and after the movie.

- Since we don't have to go by the movie, will there still be something from the movie?

GAMEPLAY

The Big Adventure

The Big Adventure is a single-player platform adventure game from a third-person perspective. In it the Rugrats will be presented with an "ubergoal" that acts as a backbone and unifying theme to the adventure. Along the way, the player will be presented with a number of challenging situations that must be completed to progress. Each of these challenges will appear in the context of an episode of the animated series or a believable homegrown adventure around the Pickles' home.

Episodes

Throughout the game, players will be presented with situations that draw from episodes of the show, tied seamlessly into the storyline. Some example episodes with a wealth of material to draw from:

- **Escape from Mr. Friend:** Mr. Friend, an invention of Stu Pickles, runs amuck and the Rugrats have to escape and immobilize the mad toy.

- **Find Chuckie's Glasses:** Angelica is starving for attention and decides that it might be gained by hiding Chuckie's glasses somewhere in the park. The Rugrats have to face such obstacles as a sand box, "Scary Merry-go-Round," and other playground amusements and puzzles will focus on negotiating the playground to find the missing pair of glasses.

- **Give that Spike a Bone:** The Rugrats are taken to the museum by Grandpa Pickles where Tommy sees a bone on a T-Rex that would be perfect for Spike. The Rugrats must overcome a number of obstacles to retrieve the prized bone.

- **Quest for Ice-Cream Mountain:** The Rugrats are on their way to the ice-cream shop when Stu and Drew see a mini golf course that they simply must try. Central to the course is an obstacle that looks like a huge mountain of ice-cream. The Rugrats have to work their way across 18 holes avoiding obstacles typical of today's themed mini golf courses.
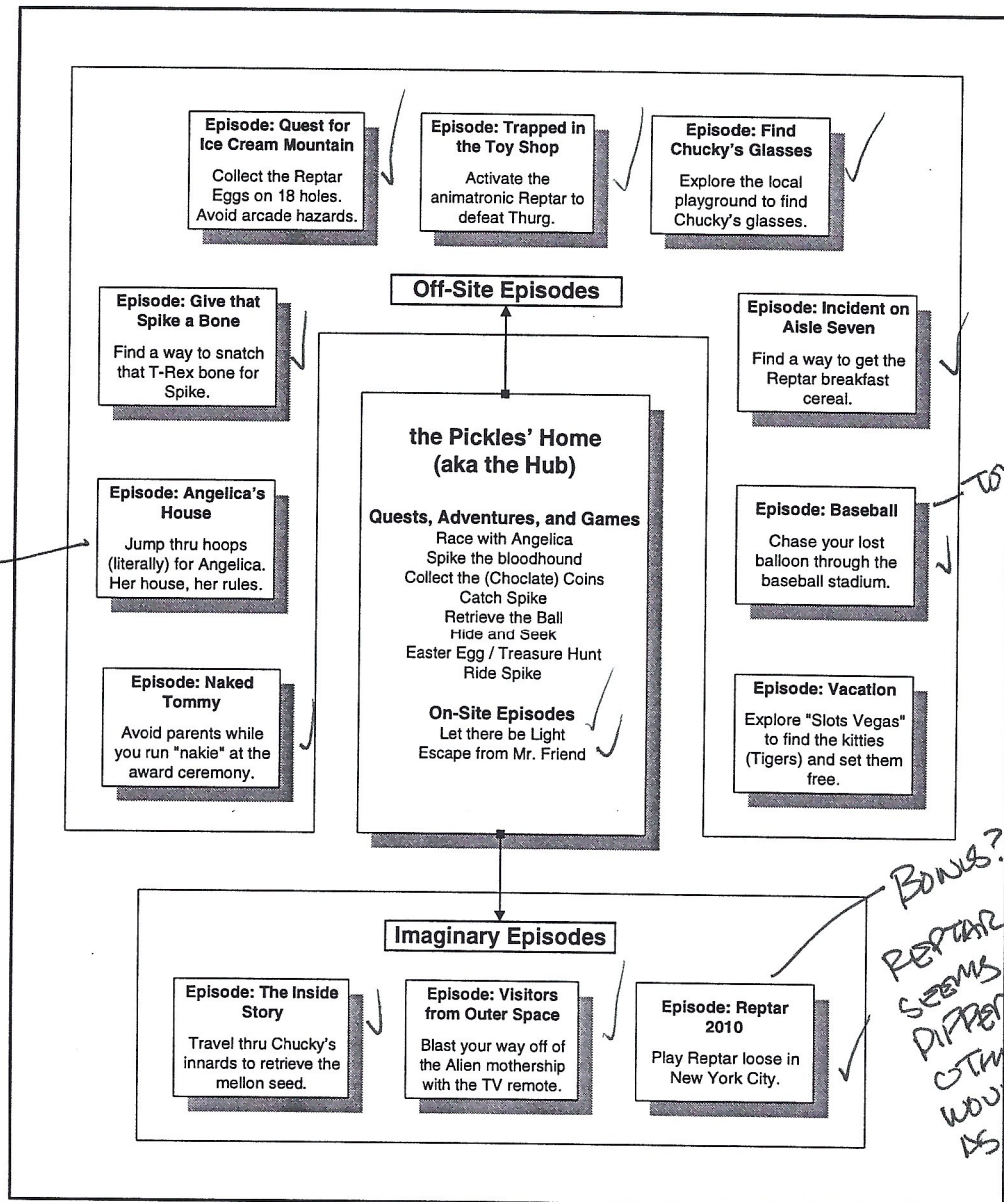
~~Episode stuff here…~~

~~Level Design?~~

~~Playable Characters~~

~~Each episode/adventure will feature one or more (2?) Rugrats in a scripted fashion~~

Progression

Gameplay centers on the Pickles' home; it acts as a central "hub" for the game, providing entry points to all levels in the game. The following figure illustrates the hub concept with some sample episodes.

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│  ┌───────────────────────────────────────────────────────────────┐   │
│  │  ┌──────────────────┐  ┌──────────────────┐  ┌──────────────┐ │   │
│  │  │ Episode: Quest for│  │ Episode: Trapped in│ │ Episode: Find │ │   │
│  │  │ Ice Cream Mountain│  │  the Toy Shop     │  │Chucky's Glasses│ │   │
│  │  │                  │  │                  │  │              │ │   │
│  │  │ Collect the Reptar│  │ Activate the     │  │ Explore the local│ │
│  │  │ Eggs on 18 holes. │  │ animatronic Reptar│ │ playground to find│ │
│  │  │ Avoid arcade hazards.│ │ defeat Thurg.   │  │ Chucky's glasses.│ │
│  │  └──────────────────┘  └──────────────────┘  └──────────────┘ │   │
│  │                                                               │   │
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│  │  │Episode: Give that│    Off-Site Episodes  │  │Episode: Incident on│
│  │  │ Spike a Bone  │    └────────────────────┘  │  Aisle Seven  ││   │
│  │  │              │    ┌──────────────────────┐ │              ││   │
│  │  │Find a way to snatch│ │                    │ │Find a way to get the│
│  │  │that T-Rex bone for│ │  the Pickles' Home  │ │ Reptar breakfast││  │
│  │  │ Spike.        │   │  (aka the Hub)      │ │    cereal.    ││   │
│  │  └──────────────┘   │                      │ └──────────────┘│   │
│  │                     │ Quests, Adventures, and Games           │   │
│  │  ┌──────────────┐   │    Race with Angelica │ ┌──────────────┐│   │
│  │  │Episode: Angelica's│ │  Spike the bloodhound│ │Episode: Baseball││ │
│  │  │    House      │   │ Collect the (Choclate) Coins│           ││   │
│  │  │              │   │    Catch Spike       │ │Chase your lost ││   │
│  │  │Jump thru hoops│   │   Retrieve the Ball  │ │balloon through the│
│  │  │(literally) for Angelica.│ Hide and Seek   │ │baseball stadium.││  │
│  │  │Her house, her rules.│ │Easter Egg / Treasure Hunt│         ││   │
│  │  └──────────────┘   │     Ride Spike       │ └──────────────┘│   │
│  │                     │                      │                 │   │
│  │  ┌──────────────┐   │   On-Site Episodes   │ ┌──────────────┐│   │
│  │  │Episode: Naked │   │  Let there be Light  │ │Episode: Vacation││ │
│  │  │   Tommy       │   │ Escape from Mr. Friend│ │               ││   │
│  │  │              │   └──────────────────────┘ │Explore "Slots Vegas"│
│  │  │Avoid parents while│                       │ to find the kitties│
│  │  │you run "nakie" at the│                    │ (Tigers) and set them│
│  │  │ award ceremony.│                          │    free.      ││   │
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│  │                                                               │   │
│  │        ┌────────────────────────────────────────────┐        │   │
│  │        │              Imaginary Episodes             │        │   │
│  │        │ ┌──────────┐ ┌──────────┐ ┌──────────┐      │        │   │
│  │        │ │Episode: The│ │Episode: Visitors│ │Episode: Reptar│  │   │
│  │        │ │Inside Story│ │from Outer Space│ │  2010   │      │        │
│  │        │ │          │ │          │ │          │      │        │   │
│  │        │ │Travel thru Chucky's│ Blast your way off of│ Play Reptar loose in│
│  │        │ │innards to retrieve the│ the Alien mothership│ New York City.│  │
│  │        │ │mellon seed.│ │with the TV remote.│ │      │      │        │
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(handwritten annotations: "?", "TOMMY AT BAT", "BONUS?", "REPTAR 2010 SEEMS SO DIFFERENT THEN OTHERS PERHAPS WOULD WORK BEST AS FINAL BONUS LEVEL")

• Figure 1 – The Hub

In and around the house the player will be encouraged to explore and experiment. Along the way he or she will discover a number of challenges derived from episodes and homegrown content. Many of the situations presented in the house will be limited in scope - fun activities that provide an interesting and entertaining diversion, and a reward for exploring. Others will be more involved, requiring the player to complete a specific objective, solve a puzzle, or overcome a group of obstacles. A total of approximately 8-10 activities will populate the house.

Branching off of the hub itself are a variety of levels derived entirely from episodes of the animated series. These levels are categorized as off-site or imaginary episodes. Both categories involve a change in environment. Off-site episodes are characterized by a transition from the hub environment to another physical location: the toy store, a minigolf course, etc. These levels will make up the majority of the total gameplay in the Rugrats game. Each of these levels will be longer and more involved than the hub levels, with more complicated objectives. Approximately 8-10 such levels will be done.

Imaginary episodes take the player to more bizar re environments on a journey through the Rugrats' imagination. These levels will be relatively few in number, added to provide additional variety in the form of unique environments (Chuckie's innards), playable characters (Reptar), and objectives (blast the aliens). About 3 imaginary episodes will be included.

Lives / continues / retries?

In a typical action game "damage" is assigned to characters where missed jumps, contact with moving obstacles, and the like reduce the character's "health" as measured on a bar graph. The bar graph bottoms out when the player's health reaches zero. At this point the character "dies," but not often for long, as retries, continues, and extra lives allow the player to begin again.

For obvious reasons, this mechanic doesn't fit a product based on the Rugrats property. Tommy, Chuckie, Phil & Lil, and Angelica don't often find themselves in near-death experiences; in fact, it is rare for them to be hurt at all during an episode. Still, all action games, no matter how non-violent, need a way to punish the player for his or her mistakes. Without some form of negative reinforcement for poor performance, the player is free to waltz through the levels unhindered by the hazards present.

The Rugrats game will implement a simple variant of the "health" model described above, substituting an emotional breakdown for the death event. When the "cry" meter reaches zero, the character begins to bawl uncontrollably and a parental unit rushes to their aid. For adventures that take place in the Pickles' home, all of the Rugrats are then returned to the closest safespot (crib, playpen, or highchair). In off-site or imaginary episodes, they are returned to the last checkpoint.

There is no concept of continues or retries, so the player is free to attempt new and different strategies for any situation without concern for their performance in later levels.

Over time the "cry" meter will slowly recover from the player's mistakes, and some items will be scattered around the levels to assist in this process. Reptar bars and milk bottles will restore varying levels of "health" when picked up by the player.

Save Game

A game of Rugrats can be saved to memory cartridge at any time. The save game process will be initiated from an entry on the pause menu. A very detailed image of the game in progress will be recorded, including everything about the player's current position and state, as well as the status of the world around him. Early prototypes of this save game code allow the player to save the game in mid-jump.

In addition, passwords will be given following the successful completion of each of the game's levels. Password save games will encode significantly less information, including only basic character information and a list of completed levels.

Difficulty and Group Dynamic

A central theme of gameplay in the Big Adventure is cooperative puzzle-solving. In all but the easiest difficulty mode, players will have to solve puzzles and overcome obstacles using the combined resources of Tommy, Chuckie, and Phil & Lil. Players can choose from three difficulty settings for Babies, Big Kids, or Grown-Up's.

In Baby mode, the player takes on the role of Tommy, working his way through the world to achieve the end goal. Gameplay in Baby mode will focus on "at your own pace" exploration and discovery, along with simple character actions - walking, running, and jumping. Tension, damage, and pacing are set to create a very relaxed and low-key experience in this mode. Throughout the game, Tommy will talk to the player, offering hints and feedback.

The Big Kids mode ads the challenge of cooperative puzzle-solving to the free-roaming exploration and adventure Baby mode. In this mode, players control both Tommy and his best friend Chuckie along the way. Tommy and Chuckie are inseparable, and it is the player's job to find a way for both of them to navigate the many hazards and obstacles along the way. Play begins with the control focus on Tommy. As he moves around the level, Chuckie will walk, crawl, or run closely behind. Whenever Tommy performs an action more advanced than these basic methods of transportation (ex - jump, tumble, etc.), or if he enters an area that requires precise operation of those basic controls (ex - walking through a minefield), Chuckie will detach from Tommy and loiter in that area, afraid or just unwilling to proceed on his own.

In order for Chuckie to move on, the player must take control and guide him to a point when normal play can continue. Should the player decide to continue on with Chuckie in the lead, Tommy and the other Rugrats will toddle along willingly. Switching control focus is easily accomplished by pressing a button on the controller that jumps between available characters.

Several situations can arise with this group dynamic gameplay:

- Tommy charges forward on point, wriggling, jumping, and crawling while Chuckie stands helpless, unable to follow in the fearless footsteps of his best buddy. At some point, the player has to switch back to Chuckie and guide him through the same hazards or find a path more appropriate for him to follow.

- Once again, Tommy has left Chuckie in the dust, this time for good reason. Until Tommy goes forward and opens another passage, Chuckie simply cannot fit - he's a big kid after all.

- Our toddler twosome reach a point that Tommy cannot get past. He has to urge Chuckie to press on and open a passage for him.

~~All of these situations can be combined in many ways to create a variety of interactions between the characters and a strong atmosphere of combined effort.~~

~~With the introduction of additional arcade action, the Big Kids mode has increased tension, but remains mostly self-paced.~~

~~For Grown-Up's, Phil & Lil join Tommy and Chuckie to make things even tougher. Phil & Lil are something of a special case in that the player controls both characters at once. They work on everything as a pair, boosting one another to reach elevated items, lifting heavy items together, and assisting one another down from high spots. In order for Tommy, Chuckie and the Twins to successfully achieve their objectives, they will all have to work together and help one another through the tough spots.~~

~~Each character will have a trait that defines a maximum distance that they can be from the rest of the group. Once that distance is reached, the character will refuse to proceed without the others. A special animation and sound will be used to indicate this to the player: "I can't leave Chuckie behind!" says Tommy, shaking his head vigorously. In relative terms, Tommy would have the highest maximum distance (he's the fearless leader), and scaredy-cat Chuckie would have the shortest, while Phil & Lil would lie somewhere in-between.~~

The Role of communication

Communication will have an important role in recreating the show's ambiance and in communicating the fears, suggestions, and opinions of the characters. The Rugrats will communicate with one another and the player via dialogue created to fit the situations and challenges that the characters face.

Triggered discussions will occur as needed. These will be completely scripted reactions to objects or situations in the game, allowing the characters to voice their thoughts. From Chuckie pleading with Tommy not to leave him alone, to the Twins bubbling enthusiasm for the adventure ahead, this dialogue creates the humor and atmosphere of the Rugrats universe.

Example: Tommy spots a worm in the backyard and goes to investigate. "Look guys, its a worm." "I wouldn't touch that, Tommy, they got germs," pipes Chuckie. "Mmmm, WORMS!" says Phil. "Save some for us!" cries Lil.

In early levels, running commentary will be used by Tommy to goad the player along, congratulate him for a job well done, and offer suggestions for tough puzzles.

Communication with the player will be delivered indirectly, as if the characters were speaking out loud to themselves. Creating dialogue that directly addresses the player ("Hey, now press the "X" button to make me jump.") would be a mistake as it breaks down the wall and calls into question the nature of the relationship between the character and player.

All dialogue will be non-interactive. That is, players will never take any direct role in initiating or managing conversations.

Kids' Games

Kids' Games is the second mode of play featured in the Rugrat product. It is a first-person action game based on the games we all played as kids – Capture the Flag, Tag, Kill the Man with the Ball, and the like. On the Sony Playstation, this mode will support up to two players via split-screen.

The premise is very simple – each player selects a Rugrats character (Tommy, Chuckie, Phil & Lil, Angelica, or Spike) and the game begins. The action takes place in the same settings used by the Big Adventure (the Pickles' home, the neighborhood park, the mini golf course, etc.). The level and game could be chosen at random, by the players, or in an established progression.

DECIDE
WHICH GAMES.
PERHAPS SPECIFIC
GAMES FOR ONE
PLAYER. AND OTHERS
PERHAPS FOR TWO.
TAG ②
HIDEN' SEEK ①   ETC.

MECHANICS

Menu Structure

The following figure illustrates the Rugrats menu structure. A detailed description of each element follows. Complete storyboards and sample screens are included in **Appendix C - Screen Graphics and Interface Design.**
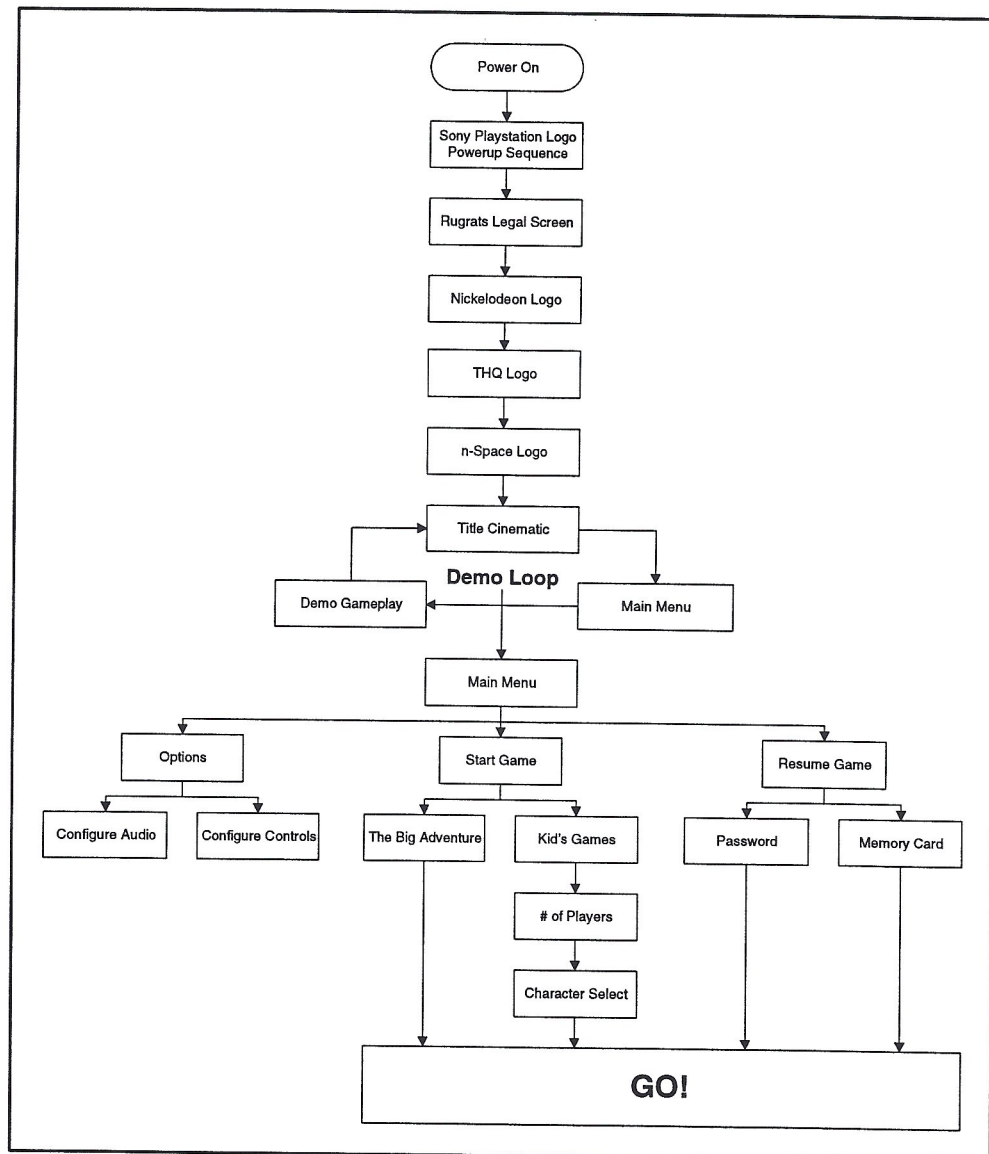
• Figure 2 - Menu Structure

Sony Playstation Logo Powerup Sequence

Display the Sony Playstation powerup sequence.

Rugrats Legal Screen

Display the product's legal information (copyrights, trademarks, etc.) as required by Nickelodeon, THQ, and n-Space.

Nickelodeon Logo

Display the Nickelodeon logo per their specifications.

THQ Logo

Display the THQ logo per their specifications.

n-Space Logo

Display the n-Space logo sequence. Fade to black after time-out or user input.

Demo Loop

1. Title Cinematic. A real-time cinematic featuring the primary Rugrats characters in scenes based on the intro to the animated series. Ends with a seamless transition from the Rugrats burst logo shape to the Main Menu.

2. Main Menu. The demo loop pauses on the main menu once per cycle. A complete description of the main menu is presented below.

3. Demo Gameplay. Simulated gameplay in different levels using canned paths and camera cuts. Similar in execution to Oddworld: Abe's Oddysee demo play.

Main Menu

User input at any point during the Demo Loop takes the player directly to this screen. Three options are available.

I. Start Game. Selecting this option activates a sub-menu where the player must choose his or her mode of play:

  A. The Big Adventure. Selecting this option begins a new game in this mode.

  B. Kid's Games. Players that choose this mode of play will be faced with some additional decision-making. First, another sub-menu will appear with the option to play in single or two-player (splitscreen) mode. Once this choice is made, a character select screen appears where each player chooses the Rugrat he or she would like to control. When all players have made their selection the game begins.

II.   Resume Game. Allows the player to resume play from password or memory card. Each of these options appear as sub-menu selections.

     A.   Password. Users selecting this option will be prompted to enter a combination of symbols that represent button presses on the Playstation controller: the directional controls ◀ , ▶ , ▲ , and ▼ , as well as ▲, ■, ●, and ✕. The sequence of button presses builds a pyramid of children's blocks, each positioned to show the appropriate symbol. The select button will be used as a delete key.

             Correctly entered passwords will be rewarded with a positive sound effect before the game loads. Improperly entered or invalid passwords will be met with a negative sound and "Try Again" message as the block pyramid crumbles down to the last valid block.

     B.   Memory Card. When this option is selected both memory card slots are scanned for cards with valid Rugrats save games. If one or more suitable matches are found, the player is prompted to choose a game to restore. If no memory cards are inserted or if no Rugrats save games are found, the user will be given the option to insert a new card and continue or abort the screen.

III.   Options. Players select this option to adjust audio options and choose controller mapping.

     A.   Sound. Allows the player to adjust the relative volumes of music and sound effects. Features a real-time model of a toy radio.

     B.   Controller. Displays a Playstation controller with callouts on each button that describe its function. Player cycles through available layouts, choosing the one that best fits his or her style of play. The controller layouts are shown in **Appendix E - Controller Layouts**.

Objects

In the animated series, Tommy and his pals inhabit a sparsely appointed world. There is little to get in the way of the action and many of the furnishings of the Pickles' home come and go from episode to episode as appropriate to the script. In the game, this observation has a number of important side-effects, not the least of which relates to interactivity. Because the Rugrats' world is sparse, it is critical that everything in it be interactive. Dressers, doors, and dishwashers should open and close, toilets should flush, and the swingset in the backyard should... well, it should swing. This provides the player with lots to explore and tinker with, as well as creating lots of opportunity for puzzle-solving.

The objects that appear in the various levels of the Rugrats game can be categorized by their type (inventory, carry, move, or fixed) and their role in the level (puzzle piece, goal, obstacle, or toy).

Object Roles

- *Puzzle piece objects* provide a partial or complete solution to a puzzle in the level. Each puzzle will consist of at least two parts (the locked door and its key, for example), both of which are considered puzzle piece objects.

  Example 1 – "Key" (screwdriver): Find the screwdriver that enables Tommy to escape the playpen and begin his adventure.

  Example 2 – "Locked Door" (toilet): Clog the toilet to flood the bathroom.

- *Goal objects* act as the central objective of a level.

  Example: Collect nine golf balls to complete the level.

- *Obstacle objects* are placed in each level to challenge the player physically, forcing them to navigate over, under, or around them.

  Example: Climb onto the couch back to grab the balloon.

- *Toy objects* provide entertaining diversions to the task at hand. These objects are "fluff" and have no real impact on achieving the goals of a level. Instead they are included to give the world a "living books" feel that encourages exploration and experimentation.

  Example: Crank the jack-in-the-box to see Chuckie's reaction.

Some objects are best treated as having multiple roles. The toilet in the above example would probably be best modeled as a combination puzzle piece / toy object. It is primarily a puzzle because completing the level requires the player to clog it and flood the bathroom. On the other hand, we would be pretty negligent as designers if we ignored the potential of a toilet as a toy object! Where literal "locked door" puzzle elements would surely ignore interactions with objects other than keys, a toilet is open to a multitude of humorous combinations.

Object Types

- *Inventory objects* are items that are collected or used with other objects in the world. When grabbed, inventory items go directly into the player's inventory. Inventory objects are always used as puzzle pieces (like a key or Angelica's doll Cynthia) or goal items (collect the golf balls at Ice Cream Mountain) since they cannot be activated. To use an inventory item, simply activate the object that it is used with and select it from the inventory pop-up.

  When an inventory item is used in the correct context it is removed from the player's inventory. Most of the time, items incorrectly used remain in inventory. Inventory objects will never be destroyed or removed from play due to improper usage.

Example: Tommy has a blue key in his diaper as he approaches a door of the same color. Pressing the action button at the door would normally open it, but this door is locked and requires a key. An inventory pop-up appears, requesting the player to choose an item to use with the door. Based on the blue emblem on the door the player selects the blue key. The door unlocks and opens. The blue key is removed from the player's inventory.

- *Carry objects* are items that are too big to be stowed in inventory and must be carried around the levels with two hands. This type of object is most often used as a puzzle piece or toy, but can also be used as the goal of a level (recover the ball from the neighbor's yard and return it to the start point) or as an obstacle (move all of the balls blocking your way). To release a carry item simply press the grab button a second time – the length of time this button is depressed prior to release determines the distance it will travel. A quick tap will drop it at the character's feet, a prolonged hold and release will throw the object. When the player is holding a carry object the action button will only work if that item can be activated. You cannot, for example, open a door while carrying a ball.

- *Move objects* are items that cannot be carried by the Rugrats as they are too heavy or unwieldy. Instead they can be pushed or pulled around the levels and manipulated into positions where they are useful as step-ups, bridges, barricades, and the like. Pushing and pulling is accomplished by directing the character towards (push) or away from (pull) the object with the action button pressed. Move objects are useful as puzzle pieces (push the chair into position so Tommy can climb up onto the counter) as well as toy and obstacle objects.

- *Fixed objects* are just that – large, heavy objects that cannot be moved or carried by the Rugrats. A table, couch, or recliner are all examples of fixed objects. Fixed objects are really only useful as obstacles or toys.

Where appropriate, any carry, move, or fixed objects can be "active." This allows for the object to exhibit some degree of interaction with the player. Inventory items cannot be activated. Some examples of "active" objects include a recliner (reclines), jack-in-the box (pops open), desk lamp (turns on), toilet (flushes), and dresser (drawers open).

The active states of some objects may change the way in which the player can use them. A dresser, for example, would normally be a difficult or impossible thing for the Rugrats to climb onto. Once the drawer is opened, though, it becomes a simple task.

Some objects may have additional physical properties. A couch, for example, should react to the weight of the characters and allow them to bounce/jump higher.

The following table summarizes the object types and roles described above.

Type	Description	Role	Example
Inventory	Items that are collected or used with other items in the world. Go directly into inventory.	Puzzle Piece or Goal	Key, Golf Ball
Carry	Items that are too big for inventory and must be carried with two hands.	Puzzle Piece, Toy, Goal, or Obstacle.	Ball, Jack-in-the-Box
Move	Items that can only be pushed around the levels.	Puzzle Piece, Toy, or Obstacle	Kitchen Chair, Toy Box
Fixed	Items that are immovable.	Obstacle or Toy	Recliner, Table

Inventory System

The inventory system provides four slots for the storage of items collected by the player during his adventures. Each slot can hold one unique object or a collection of identical objects. Each inventory object will have a unique icon that clearly identifies it in the inventory pop-up menu. Collections will be denoted with a single icon and a counter.

Whenever the player presses the action button near an object that requires a "key" object, the inventory system pop-up menu appears. The menu is in the shape of a cross, much like the Playstation d-pad, with one object slot at each location, right, left, up, and down. In the center is an icon of the circle (grab) button. Pressing the circle button again will cancel the menu. Pressing the d-pad in any of the cardinal directions will highlight the appropriate object. Pressing the circle button with an object highlighted selects the object, plays an object-specific confirmation sound and hides the menu. The character then performs a short scripted animation of "drawing" the item and using it with the appropriate object.

Grabbed inventory items go directly to the inventory. If the inventory is full and another item is grabbed, the pop-up menu will appear and the player will have to choose an item to replace. This replacement menu works in exactly the same manner as the use menu described above.

Controls

The controller mapping scheme for Rugrats has been designed with simplicity and efficiency in mind. Every effort was made early on to limit button usage to the D-pad plus a jump button and an action button. Unfortunately, it proved impossible to define a two-button control scheme with the level of depth and flexibility required by today's 3rd person games.

The following table summarizes a control scheme that offsets its complexity (six buttons) with a clean layout. In this configuration the three primary functions (Jump, Action, and Grab) are all focused in easy reach of the right thumb. The remaining three functions are less critical to gameplay for the beginner and are located in areas of the Playstation controller that are less frequently explored and more difficult to reach.

Function	Default Mapping	Description
Directional Control	D-Pad	Directs the character forwards, backwards, left, and right. Also provides up and down control, as well as pivoting in place.
Jump	"X" Button	Performs the character's jump action. Used with the d-pad input to determine jump direction. May also be used for special case actions like swimming.
Action	"Square" Button	Triggers a physical action appropriate to the character's situation and surroundings.
Mode	"Triangle" Button	Switches between walk, run, crawl, and sneak ("tippy-toes") modes. Also used with left/right on the d-pad for side-stepping.
Grab	"Circle" Button	Picks up nearby items. & DROP.
View Change	Select	If multiple viewpoints are provided this button will switch between them.
Pause	Start	Pauses the game and provides menu of in-game options.
Character Select	Left Shoulder	Switch control focus between available characters.
Look	Right Shoulder	When used with the d-pad, this allows the player to pan the camera around the character.

The Action button handles the interaction between the character and all move and fixed type objects in the world, as well as any carry objects that can be activated.

In-Game Visuals

All visuals will be realized with a third-generation Playstation engine featuring smooth-shaded, lit and textured polygons. The world will be a dynamic, reactive, and fully-realized place – a perfect translation of the animated series in 3D. A number of special techniques will be used to create the visual style of a "living cartoon," including heavy usage of gouraud shading and simple texture maps.

All characters will be detailed polygonal models smoothly animated with a proprietary variant of the Playstation's MIME technology. All characters will be capable of a variety of actions, each with an appropriate on-screen result. In addition to the basic toolkit of running, walking, and jumping actions, they will be capable of a number of specialty actions in certain situations.

Cinematics

The game will make extensive use of scripted real-time cinematic sequences to introduce the player to characters in the game and tell its story. These sequences will be interwoven with the action as tightly as possible to present a consistent, seamless picture of the world and the characters in it.

Sound and Music

Sound and music will play a key role in creating the Rugrats atmosphere. Where possible, sound effects from the show should be used. When new sounds are required, the show's regular Foley artists should be employed for the most authentic feel.

We anticipate a significant amount of dialogue during the game. Whenever possible, the original voice actors should be used for all voice-over material.

Finally, the music used in the game should be taken from the soundtrack of the animated series or should be composed by regular composers.

CHARACTERS

Main Playable Characters

- **Tommy Pickles**

  Leader of our intrepid band of Rugrats, Tommy is intelligent, courageous, compassionate and articulate. He also happens to be one year old, which gives him an endlessly interesting perspective on life. To Tommy Pickles, the world doesn't always make sense, but it makes an incredible amusement park.

  Tommy is the main protagonist of the game and the best all-around character. He can run, jump, carry light to medium items, crawl through small to large spaces, and knock over light to medium objects.

- **Chuckie Finster**

  In every crowd there's a worrywart, and among the Rugrats it's Charles Finster, Jr. Tommy's best friend Chuckie is a likable two-year-old scaredy-cat who sees monsters in every closet and worries about a hundred ways things can go wrong. Like his dad, Charles, Sr., Chuckie never forgets that every silver lining comes with a cloud attached.

  Because Chuckie is a bit older than Tommy he has certain advantages. He can run faster than Tommy, but cannot jump quite as high. He can carry and knock over light to heavy objects and crawl through medium to large spaces. His biggest problem is a fear of nearly everything.

- **Phil & Lil DeVille**

  Next door to the Pickles live fifteen-month-old twins Phil & Lil DeVille. They think alike, act alike, and even finish each other's sentences. Often visiting the Pickles with their mom, Betty, the twins are loyal followers of Tommy Pickles who joyfully participate in every Rugrats adventure – and the messier and scarier, the better. Phil & Lil are as close as siblings can be. They get along wonderfully and argue frequently.

  The twins are played both at once. They are not as fast as Tommy and are the poorest jumpers. However, they can scale things much higher than the other characters by boosting one another. Together they can carry objects that are much heavier than any single Rugrat can manage. They can crawl in small to large spaces and knock over multiple light to heavy objects at once.

Level-Specific Playable Characters

- **Spike Pickles**

  Like most family dogs, Spike is a friendly, loyal mutt whose main interest is food. Stu and Didi consider him a dumb but pleasant member of the family. Yet Spike is often more aware of what the Rugrats are up to than they are.

Tommy's dog can be used as a method of transportation at some points in the game. The Rugrats can call for his assistance with the hot dog squeaky toy or by collecting dog biscuits.

■ **Reptar**

The star of a popular cartoon show, Reptar is a giant lizard beloved by Tommy and his pals. Heavily merchandised, Reptar product has invaded most areas of the Rugrat world – Reptar candy bars, dolls, clothes, a feature, even a breakfast cereal. All in all, the Rugrats think Reptar is the greatest thing in the whole world!

Reptar could appear in the game as a bonus round character. Eating the Dummi Bears, trashing cities, or doing a dance routine (like Reptar on Ice) are all possibilities.

Non-Playable Characters

■ **Angelica Pickles**

She's tempestuous. She's tyrannical. She's three. Tommy's cousin Angelica is a Rugrats alumna who can talk both to grown-ups and toddlers. She manipulates her parents, shows off for strangers – and when she comes to play, the Rugrats run for cover. But however cleverly devilish her schemes, somehow Angelica always seems to get the worst of it.

Angelica is the main antagonist of the game. Many of the problems and obstacles the babies face are a direct result of her actions. Other reasons for interaction with Angelica would be her cat, Fluffy, and her doll, Cynthia.

■ **Susie Carmichaels**

Tommy and the Rugrats look up to their friend Susie Carmichaels. She possesses the kind of wisdom you can only get from experience. After all, she's three.

Susie is the child of an overachieving mother (French chef, airline pilot, and doctor) and a cartoon-writing dad (the famous Dummi Bears series). Susie's energetic, optimistic, and quick to offer friendly advice and reassurance to an overwrought Rugrat. Susie stands up for what's right – which often puts her right in Angelica's way.

■ **Grandpa**

Lou Pickles, Tommy's paternal grandfather, is the classic, cantankerous, old geezer. He lives in the Pickles' house and often acts as a convenient baby-sitter for his Rugrat grandson, Tommy. Grandpa is indulgent with the kids. As such, he is almost more of a "Rugrat" than an adult – functioning as a bridge between the world of kids and the world of adults.

■ **Stu and Didi Pickles**

Tommy's mother and father. Stu Pickles is a loving, concerned but absent-minded dad. He runs his own toy manufacturing company, Pickles Industries. His workshop is in the Pickles' basement.

Didi Pickles is the classic, practical, responsible but often over-protective mom. Obsessed with doing things the "right" way, Didi has read all the latest child-rearing books and watched every "How to Raise your Kids" video ever made.

In the game, Stu and Didi make cameo appearances to deliver the Rugrats from their misadventures to safe areas like the playpen or crib.

■ **Drew and Charlotte Pickles**

Angelica's mother and father. Although he's clean-cut with short, neat hair and glasses, Stu's older brother Drew looks otherwise identical to him. The similarity, however, between the two ends there. While Stu is an absent-minded inventor, Drew is a staid investment banker with a somewhat lackluster imagination.

Never out of her business suit, Charlotte has a cellular phone permanently affixed to her ear, through which she wheels and deals with high-powered honchos, sheiks, and her long-suffering assistant, Jonathan.

■ **Charles Finster, Sr.**

Chuckie's father. A single parent, Charles is an overprotective dad who educates his son in the way of the worrier. Charles is a compulsive neatnik, too, duly proud of his color-coded system for filing his self-help videos. Charles, Sr. And Stu Pickles have been friends forever, and to imagine them as Rugrats, all you need to do is look at their kids.

■ **Betty and Howard DeVille**

Betty, the mother of Phil & Lil, is a big, loud, friendly woman. Even though they outwardly seem to be opposites, Betty and Didi are best friends. Although she comes off as a tough gal, always giving a friendly-but-painful backslap, Betty fawns over her twins with the instincts of a mother bear.

In contrast to his wife, Betty's husband, Howard, is a small, shy, quiet man who is rarely allowed to get a word in edgewise – a fact to which he has grown quite accustomed.

■ **Boris and Minka**

Tommy's maternal grandparents from the old country, Boris and Minka, live not far from the Pickles' home. Boris and Minka can't help but argue – it's their nature. The arguments usually start in English over completely silly things, then devolve into their native language, which no one else understands.

■ **Dylan Prescott Pickles**

Tommy's baby brother, Dylan ("Dil Pickles?"), makes his first appearance in the Rugrats movie, where he is eventually accepted into the fold by Tommy, Chuckie, and the twins. He spends most of the movie antagonizing Tommy in a way that only a little brother could get away with, trying Tommy's patience and commitment.

Directories:

We are going to try to keep the directories as clean as possible.

I'm going to create a directory for each on of the models as this is how it's going to work.

N:\mod\tommy
- Hie: Will be used for hierarchy
- Mod: This folder is for saving your max work
- Motion: This folder is for all the animations due to the four body parts. If you want to save the animation as a whole, save it in Mod folder.
- RSD: This folder is for all the separate body parts
- Tim: 4 Bit texture maps
- Tga: 24 Bit texture maps

N:\mod\Chuckie
- Hie: Will be used for hierarchy
- Mod: This folder is for saving your Max work
- Motion: This folder is for all the animations due to the four body parts. If you want to save the animation as a whole, save it in Mod folder.
- RSD: This folder is for all the separate body parts
- Tim: 4 Bit texture maps
- Tga: 24 Bit texture maps

N:\mod\Phil

- Hie: Will be used for hierarchy
- Mod: This folder is for saving your max work
- Motion: This folder is for all the animations due to the four body parts. If you want to save the animation as a whole, save it in Mod folder.
- RSD: This folder is for all the separate body parts
- Tim: 4 Bit texture maps
- Tga: 24 Bit texture maps
-

N:\mod\Lil

- Hie: Will be used for hierarchy
- Mod: This folder is for saving your Max work
- Motion: This folder is for all the animations due to the four body parts. If you want to save the animation as a whole, save it in Mod folder.
- RSD: This folder is for all the separate body parts
- Tim: 4 Bit texture maps
- Tga: 24 Bit texture maps

**N:\mod\Terrain\home**

- Mod: This folder is for saving your Max work
- Rsd: This folder is for exporting the terrain to the Dev board
- Tim: 4 Bit texture maps

- TGA   24 Bit texture maps

I would like you guys to keep your work in your work directory and you should make directories just like what I typed up above.   Once you are sure that your work is final, we will move them to the mod directory. Problems we had in BugRiders was we had 5 different version of the same models and never know which was the right one to use.

Naming models:

All models and RSD should be named the same as diagram shown below:
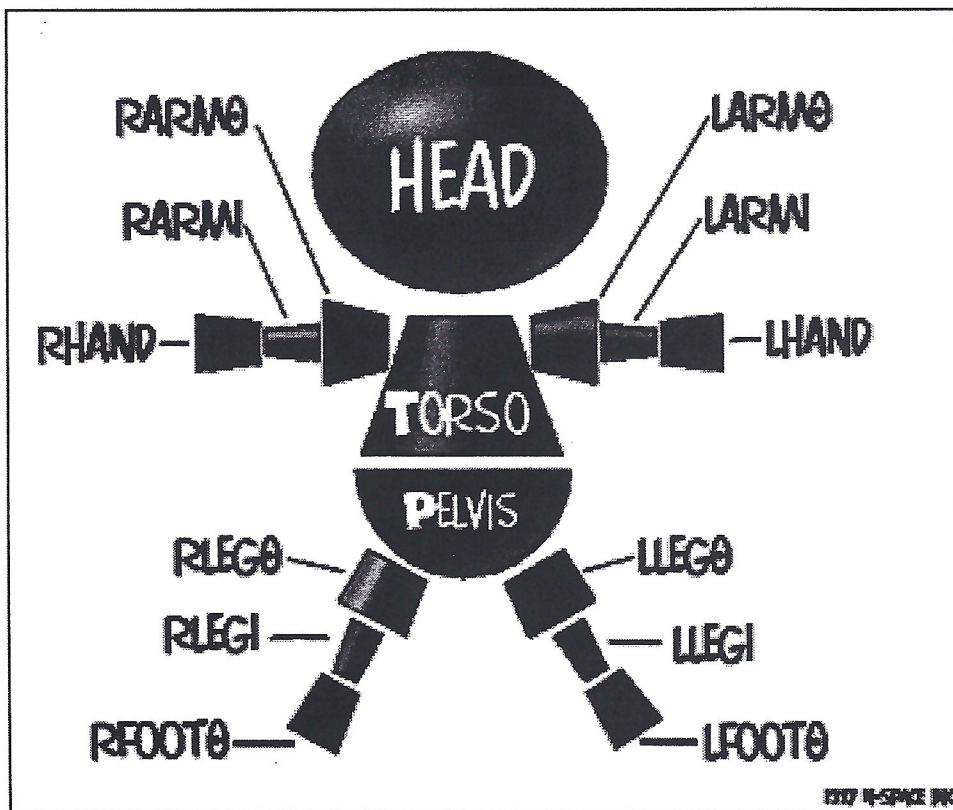
Art by Dave Ensign

Rules for Hierarchy

**First you are going to need to build a hierarchy before you start animating.
In order to do this, follow this before going on.**

- After you're done building models, place pivots to where ever you want them to work.

- Make sure there are no animations involve

- In the properties, make sure you name each model as PART_ID=TORSO, PART_ID=HEAD, etc. **(They all need to be capitalized).**

- Make sure the models are named the same as in properties

- Select all the parts

- Make sure models are all unlinked

- Go to Utilities and scroll down to Reset Transformation

- Click on Reset

(Note) Reset Transformation does not change the placements, only the orientation

- Link all the pieces together and move the pelvis above 0,0,0 for the walk cycle

- All objects need to be selected **(must be done before exporting otherwise it won't work)**

- Go to File then to Export to **Hie (Hierarchy)** Save the file in the **Hierarchy** folder. I will make a directory for each of the characters.

Now you'll need to export each body parts to separate rsd files.

- Select an object

- Go to Files and Export to **Playstation RSD** and save it to any name you want. The name you're giving won't matter because it will only save out the name of your objects. The dialogue box will come up and you can click on **Export all objects**. This way you don't have to export all the body parts to separate rsd files. It will do that for you automatically. Save the rsd in the **RSD** folder. Using this Exporter, you can go straight to Material Editor and start texturing.

(Note*)
When you export, it will give you an option whether if you want to use quads or not.

If you already have that same RSD model textured then click on PLY so you won't have to retexture. This will only work if you've only move the verts. If you rebuild the faces or add more polys then it won't work.

Now you are ready to start your animation

- Animate all the parts you'll need to animate.

You can save your work in your work directory

Naming animation files:

Let's say we did a walk cycle of Tommy. Save the animation project in the mod Directory
N:\mod\Tommy\mod

We will now export the body animations to four different parts:
1. Head and Torso
2. Pelvis with both legs
3. all parts to Left arm
4. all parts to Right arm

Save all the separate animations in the character's **Motion** directory

Select the **Head** and **Torso**
Go to File and Export to Duke Anim
Name it walku (U stands for upper body)
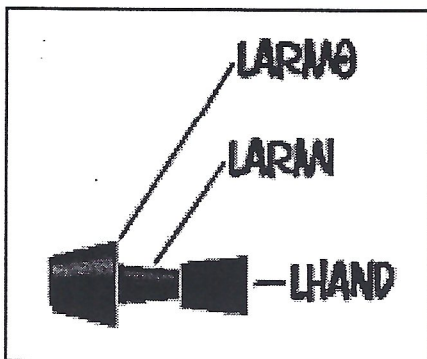

Select the **Pelvis** with **both legs**
Go to File and Export to Duke Anim
Name it walk (Walk should be fine since the legs are doing it)
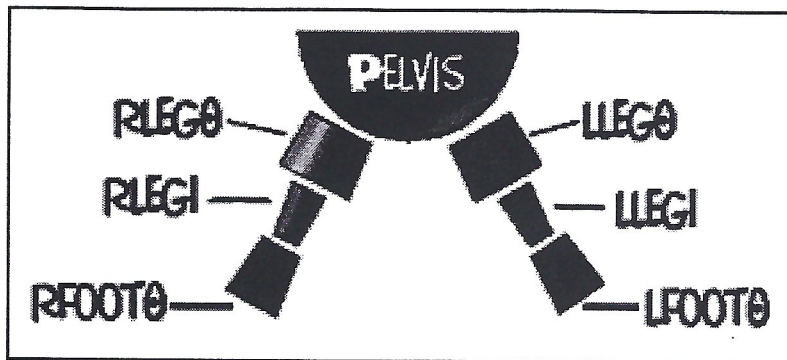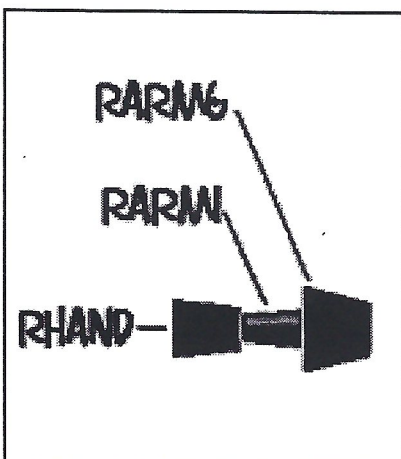
Select the **Left arm**
Go to File and Export to Duke Anim
Name it walkL (L is for Left)

Select the **Right arm**
Go to File and Export to Duke Anim
Name it walkR (R is for Right)

If we keep all the walkcycle file name starting with walk, it will be easier to keep all the walkcycle animations together.

As you save it out, you will see the animation will play back through each frames

To add in interpolation, go in the dos window and go to the anim directory. Type **Edit Filename.anim**
There you will see the blue screen with all the info you will need. The first column is the Keyframes. The second row is the interpolation. You will be able to adjust the timing for each one of the keyframes for that anim. The third column will tell you where these animation keyframes are located .

Terrains:

Set up your grid
- Go to View to Grid & SnapSetting
- The dialogue box pops up
- In the grid spacing type in 1024 (The number of units that you are working with)

Build a box
- Change the Length, width, and height to 1024

Make sure that box will fit in the grid.

- Go to Mesh
- Select all the faces and flip normals to inside

Now you can actually start building
From Top View you will start building the floor plan

- Make sure the snap tool is on so it will snap to grid point
- Turn on your angle (This will come in handy for later
- Make sure your window selection has the square all the way around.

- Go to Subobject to face
- Click on Extrude (Note* You must use - minus with the number so the faces will be built out
- Type -1024
- Keep extruding faces till you get the right size of the room vertically or horizontally
- now you will want to select and extrude out to the right dimension for a full size room
- Next you'll need to build a door to move on to the next room
- Select 3 grid faces,(where you would place the door way.)
- Extrude twice at -1024 (The reason is so it won't have priority problems and won't be intersecting and it will solve problems with collisions boxes.
- Keep doing this method till you finish building your rooms
- Select top faces of your rooms and extrude -1024 ,a number of times to equal the height of the ceiling.
- Name the terrain as LEVEL in all caps so it will export correctly

Mapping:
You will need to create a mapping box
- Create a box to 1024x1024x1024
- Name it mapping box (When you export it will leave mapping box behind)
- Click on Generate Mapping Coords
- Click on UVW Mapping Modifier
- Down below click on box and then click on fit

- Go to Material Editor
- Click on Type and then click on Multi-Sub Objects
- Click on gray bar-Material 1 (this will take you to basic parameter)
- Type the name in the blank white box
- Click on the little gray box next to diffuse
- Go to type and select bitmap. Click ok
- Click on gray box next to bitmap to load up texture. (Note* TGA images must be in the level's tim directory so it can be exported out of max and to Dev Board

- Hit appy material

Go back to the terrain
- Select all the faces and go down to ID#
- in ID# type in 1 (This is where your material is at. When you apply other textures, they will need it's own ID#
- with Subobject highlighted, click UVW mapping modifier
- Go down to Acquire and select your mapping box
- Hit on Relative
- Go back to Material Editor while the terrain being selected and click assign material.

What happens is that you assigned the same mapping coordinate from the mapping box right on to the terrain.
- Go to More in the Modifier list and click on Terrain Info
- Click on Subobject
- Select faces of one room (it will automatically be 1)
- Under Room # go to 2. It will deselect everything
- Select the next room. If there's a hallway attach, make sure you select it with one of the room
- After you select all of your rooms to it's Room # , click check for errors. It will tell you if you have duplicate polys between room #1 & 2.

*If you do have duplicate rooms go back to whatever room and deselect the face.
- Check for errors again
- Now, collapse your modifier stack
- Go to File to Export to Duke Level Data
- Type in the name to be exported

The dialogue box pops up
- Click on Export Terrain
- Click on Snap Verts to Terrain Grid

If you have a character in the terrain, then click on Export Launchpoint Data